

102. (Amended) A hygiene article, comprising:
a liquid-permeable layer;
a substantially liquid-impermeable layer; and
an absorbent body between the liquid-permeable layer and the substantially liquid-impermeable layer;
the absorbent body comprising a flowable absorbent material which remains able to flow after absorbing at least about 10.5 grams water per gram flowable absorbent material.

REMARKS

Independent Claims 45, 62 and 102 have been amended to require that the flowable absorbent material remains able to flow after absorbing at least about 10.5 grams water per gram flowable absorbent material. This amendment is supported on Page 15, lines 8-30 of the Specification. The ability of the flowable absorbent material to flow after absorbing this much water, arises from the fact that the flowable absorbent material does not begin to expand until more than about 10.5 grams water have been absorbed per gram of absorbent material. This is in contrast to prior art absorbent materials (e.g., polyacrylates) which expand and gel after only slight water absorption, whereby the ability to flow is denied as explained on Page 15, lines 13-17.

Page 15, lines 8-25, explains how the ability to flow is assisted by the fact that the flowable absorbent material absorbs water without expanding. Specifically, the flowable absorbent material is able to absorb at least about 10.5 grams of water per gram of absorbent material without expanding under conditions existing in the absorbent body. Under certain conditions, such as where no volume increase is possible, the flowable absorbent material may absorb substantially more liquid without expanding, as indicated at Page 14, line 4 through Page 15, line 6 of the Specification.

The rejection of Claims 45-49, 57-59, 62, 68-69, 71, 73-75, 82-86, 94-96, 102-105 and 107-111 under 35 U.S.C. §102(b) as anticipated by Kellenberger (EP 0,339,461) is respectfully traversed. The Examiner maintains that Kellenberger discloses superabsorbent particles in an absorbent article that remain able to flow after being contacted with liquid. However, the Examiner has offered no evidence or support of any kind to establish this position. To the contrary, Kellenberger teaches that the superabsorbent particles, when unswollen, have a pore size which is greater than the median pore size of the matrix which contains them (P. 6, lines 20-26). This feature would inherently inhibit particle flow, even more so when the particles absorb water and swell.

Furthermore, Kellenberger does not teach or suggest a flowable absorbent material capable of flowing after absorbing at least about 10.5 times its

weight of water as required by amended Claims 45, 62 and 102. To the contrary, it is a requirement of Kellenberger that the superabsorbent particles must expand to push the matrix fibers further apart, when wet, in order to maintain an open capillary structure (P. 6, lines 27-33). The invention of Kellenberger is based on a proper selection of superabsorbent particle size rather than chemistry. The chemistry of the absorbent particles employed in the Examples of Kellenberger (PP. 9-10) is based on polyacrylic acid derivatives which swell when wet, become sticky, gel together, and do not flow. Applicants have shown that polyacrylates (which are chemically similar) will absorb very little water under conditions which prevent swelling (Specification, Table 1, P. 14).

Applicants have also shown that polyacrylates become sticky, gel together and do not flow when wet (Specification, P. 15, lines 13-17). The Examiner has provided no evidence to the contrary. Specifically, the Examiner has not shown that the polyacrylic acid-based superabsorbents used by Kellenberger (See Examples) have any ability to flow when wet. There is certainly no suggestion in Kellenberger that these superabsorbents retain any ability to flow when wet.

The rejection of Claims 60, 61, 76, 78 and 79 under 35 U.S.C. §103(a) as obvious over Kellenberger in view of LeMahieu et al. (U.S. Patent 5,904,672) is respectfully traversed. Then claims depend from Claims 45 and 62, and are patentable for at least the same reasons. Furthermore, LeMahieu et al. does not teach

or suggest a flowable absorbent material which remains able to flow after absorbing water in an amount of at least about 10.5 times its weight.

The rejection of Claims 63 and 64 under 35 U.S.C. §103(a) as obvious over Kellenberger in view of Luceri (U.S. Patent 5,807,365) is respectfully traversed. These claims depend from Claim 62, and are patentable for at least the same reasons. Furthermore, Luceri does not teach or suggest a flowable absorbent material which remains able to flow after absorbing water in an amount of at least about 10.5 times its weight.

The rejection of Claims 65, 66, 68, 70 and 72 under 35 U.S.C. §103(a) as obvious over Kellenberger in view of Plischke et al. (U.S. Patent 5,977,014) is respectfully traversed. These claims depend from Claim 62, and are patentable for at least the same reasons. Furthermore, Plischke et al. does not teach or suggest a flowable absorbent material which remains able to flow after absorbing water in an amount of at least about 10.5 times its weight. Additionally, the Examiner asserts that it would have been obvious to separate the absorbent matrix of Kellenberger with two layers and place the superabsorbent particles between them. However, such a modification would be directly contrary to the teaching of Kellenberger which requires superabsorbent particles to be positioned between individual matrix fibers, so that the matrix fibers are pushed further apart when the superabsorbent particles swell (Kellenberger, P. 6, lines 27-33). The Examiner cannot combine two references

in such a manner that would contradict or defeat the teachings of the primary reference.

The rejection of Claims 80 and 81 under 35 U.S.C. §103(a) as obvious over Kellenberger in view of Jones, Sr. (U.S. Patent 3,794,034) is respectfully traversed. These claims depend from Claim 62, and are patentable for at least the same reasons. Furthermore, Jones, Sr. does not teach or suggest a flowable absorbent material which remains able to flow after absorbing water in an amount of at least about 10.5 times its weight.

The rejection of Claims 97-101 and 106 under 35 U.S.C. §103(a) as obvious over Kellenberger in view of Reising et al. (U.S. Patent 4,988,344) is respectfully traversed. These claims depend from Claims 62 and 102, and are patentable for at least the same reasons. Furthermore, Reising et al. does not teach or suggest a flowable absorbent material which remains able to flow after absorbing water in an amount of at least about 10.5 times its weight.

The Examiner has maintained the various claim rejections based on the assertion that the superabsorbent particles in Kellenberger expand when wet to push the matrix fibers apart and, thus, remain flowable (Office Action, P. 7). Yet, the Examiner has provided no evidence indicating that these superabsorbent particles remain able to flow. Furthermore, when applying the prior art to Applicants' claims, the Examiner must take into account what is meant by the term "able to flow,"

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construed in the context of Applicants' specification. As explained above, Applicants' flowable absorbent material remains able to flow when wet, due to the fact that the absorbent material does not expand while absorbing up to about 10.5 times its own weight in liquid water. Because there is no volume expansion, the flowable absorbent material remains able to flow when wet. This is contrary to the teaching of Kellenberger, which states that the superabsorbent particles must expand when wet, to push the fiber matrix apart.

Applicants believe that the claims, as now presented, are in condition for allowance. If the Examiner feels that any issues remain, then Applicants' undersigned attorney respectfully requests a telephone interview with the Examiner.

Respectfully submitted,



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APPENDIX SHOWING MARKED-UP VERSION OF AMENDED CLAIMS

In the Claims:

45. (Amended) An absorbent article, comprising:

a liquid-permeable layer;

a substantially liquid-impermeable layer; and

an absorbent body between the liquid-permeable layer and the substantially liquid-impermeable layer;

the absorbent body comprising a flowable absorbent material which remains able to flow after [contact with a liquid] absorbing at least about 10.5 grams water per gram flowable absorbent material.

62. (Amended) The absorbent article, comprising:

a substantially liquid-impermeable layer;

an absorbent body connected to the substantially liquid-impermeable layer in a central region of the substantially liquid-impermeable layer; and

a liquid permeable layer over a side of the absorbent body opposite the substantially liquid-impermeable layer;

the absorbent body comprising a flowable absorbent material which remains able to flow after [contact with a liquid] absorbing at least about 10.5 grams water per gram flowable absorbent material.

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- an absorbent body between the liquid-permeable layer and the substantially liquid-impermeable layer;

the absorbent body comprising a flowable absorbent material which remains able to flow after [contact with a liquid] absorbing at least about 10.5 grams water per gram flowable absorbent material.

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